

Design Table

Question	Hypothesis	Sampling plan	Analysis plan	Rationale for test's sensitivity and confirmation/denial of hypothesis	Interpretation from each outcome	Theory that could be proven wrong
Does screen time affect sleep duration and behavioural problems in children?	Yes - children who spend a lot of time in front of screens sleep less and are perceived to be more anxious.	We will be using a dataset collected by Emma Axelsson in 2024, which contains data on various screen time use, sleep patterns and behaviour of 113 children aged 3 to 6 years.	<ul style="list-style-type: none"> - Choose three control variables and decide their expected outcomes. - Justify the included variables. - Carry out multiple regressions of each predictor against screen time and conclude relationships. 	A $p < 0.05$ result from regression tests to reject the null model.	Negative or no correlation with $p < 0.05$: null hypothesis rejected. Positive correlation with $p < 0.05$: null hypothesis confirmed. Any situation with $p > 0.05$: not enough evidence to confirm or reject.	More screen time has only negative impacts on sleep and behavioural outcomes in children.